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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.				
10/687,784	10/17/2003	Gaurav Singh	RZMI-P310	9860				
32986 IPSG, P.C. P.O. BOX 700640 SAN JOSE, CA 95170	7590 06/25/2007		<table border="1"><tr><td colspan="2">EXAMINER</td></tr><tr><td colspan="2">ANDREWS, LEON T</td></tr></table>		EXAMINER		ANDREWS, LEON T	
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06/25/2007	PAPER							

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/687,784

Applicant(s)

SINGH ET AL.

Examiner

Leon Andrews

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) ✓
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-20 are rejected under 35 U.S.C. 102(e) as being anticipated by **Wong** (Pub. No.: US 2004/0264464 A1).

Regarding Claim 1, **Wong** discloses a packet duplication system (device for replication of datagrams {packet}, paragraph [0009], page 1, lines 1-2), comprising:

an input port (Fig. 3, 201-1) configured to receive a packet (packets, paragraph [0019], page 2, line 2); and

Art Unit: 2616

a plurality of output ports (Fig. 3, 311) configured to output the packet, wherein:
a number of duplications of the packet for each of the plurality of output ports is controlled by descriptors (Fig.4, L3_table_index and L3 interface index; using that pointer as an index for the replicate count table to perform the lookup, paragraph [0011], page 1, lines 9-10) arranged in a linked-list table (Fig. 4, 410, L3 Table).

Regarding Claim 2, Wong discloses the packet duplication system of claim 1, wherein: each of the number of duplications is coupled to a Virtual Local Area Network (VLAN) (VLAN, paragraph [0010], page 1, line 14).

Regarding Claim 3, Wong discloses the packet duplication system of claim 1, wherein:

an encoding format (Fig. 5, 507) of the descriptors includes at least one of:
a contiguous range encoding;
a non-contiguous range encoding (Fig. 5, 507, the index points to the first entry of column of 8-entries in the L3 Table); and
a discrete encoding.

Regarding Claim 4, Wong discloses the packet duplication system of claim 1, wherein:

the descriptors arranged in the linked-list table include at least one shared descriptor (Fig.4, L3_table_index and L3 interface index; using that pointer as an index for the replicate count table to perform the lookup, paragraph [0011], page 1, lines 9-10).

Art Unit: 2616

Regarding Claim 5, Wong discloses the packet duplication system of claim 1, further comprising:

a pointer table (Fig. 4, 430, L3 Interface Table) having a width comprising a plurality of entries (entries in the L3 table are grouped to support the multiple paths, paragraph [0038], page 4, lines 4-5) coupled to the linked-list table.

Regarding Claim 6, Wong discloses the packet duplication system of claim 5, wherein:

each of the plurality of entries (entries in the L3 table are grouped to support the multiple paths, paragraph [0038], page 4, lines 4-5) corresponds to one of the plurality of output ports (Fig. 3, 311).

Regarding Claim 7, Wong discloses the packet duplication system of claim 3, wherein:

the contiguous range encoding includes a starting Virtual Local Area Network (VLAN) indicator (Fig. 8, 804) and an ending VLAN indicator (Fig. 8, 808).

Regarding Claim 8, Wong discloses the packet duplication system of claim 3, wherein:

the non-contiguous range encoding includes a most significant bit (MSB) portion (Fig. 5, 507, the offset which is 3-bit field is used to point into one of the 8 entries) of a Virtual Local Area Network (VLAN) indicator and a bitmap (Fig. 5, 506) decoded from a least significant bit (LSB) portion (Fig. 5, 507, the index points to the first entry of column of 8-entries in the L3 table) of the VLAN indicator.

Regarding Claim 9, Wong discloses the packet duplication system of claim 3, wherein:

the discrete encoding includes a first Virtual Local Area Network (VLAN) indicator (Fig. 8, 804) and a second VLAN indicator (Fig. 8, 808).

Regarding Claim 10, Wong discloses the packet duplication system of claim 3, wherein:

the encoding format is configured to be selected in response to control bits (Fig. 5, 506, 12-bit with 3-bit field).

Regarding Claim 11, Wong discloses a method of controlling a duplication of a packet (method for replication of datagrams, paragraph [0009], page 1, line 2), comprising:

receiving the packet (Fig. 3, 201-1);

accessing a first pointer (Fig. 3, 304; Fig. 5, 502, 1st-searchkey=lpm_addr[14:0] = {11'h0, ip0}; base pointer, paragraph [0039], page 4, lines 10-11);

accessing a second pointer (Fig. 3, 304; Fig. 5, 504, Next-searchkey=lpm_addr[14:0] = {next_pointer, lpn, ipn; L3 pointer, paragraph [0039], page 4, line 5);

accessing a descriptor (Fig. 4, L3_table_index and L3 interface index) in response to the second pointer; and

applying an encoding (Fig. 5, 507, the index points to the first entry of column of 8-entries in the L3 Table) for the duplication of the packet.

Art Unit: 2616

Regarding Claim 12, Wong discloses the method of controlling the duplication of the packet of claim 11, further comprising:

performing a hashing function (hash function, paragraph [0039], page 4, lines 10-11).

Regarding Claim 13, it is the corresponding method claim to device **Claim 3**. Therefore, it is rejected for the same reasons explained above.

Claim 13, the method of controlling the duplication of the packet of claim 11, wherein: applying the encoding includes:

selecting a format of descriptors, wherein the format includes at least one of:

a contiguous range encoding;

a non-contiguous range encoding; and

a discrete encoding.

Regarding Claim 14, it is the corresponding method claim to device **Claim 2**. Therefore, it is rejected for the same reasons explained above.

Claim 14, the method of controlling the duplication of the packet of claim 11, wherein:

each of a number of duplications is coupled to a Virtual Local Area Network (VLAN).

Regarding Claim 15, it is the corresponding method claim to device **Claim 4**. Therefore, it is rejected for the same reasons explained above.

Claim 15, the method of controlling the duplication of the packet of claim 11, wherein:
the descriptor includes a shared descriptor.

Regarding Claim 16, it is the corresponding method claim to device **Claim 7**. Therefore, it is rejected for the same reasons explained above.

Claim 16, the method of controlling the duplication of the packet of claim 13, wherein:
the contiguous range encoding includes a starting Virtual Local Area Network (VLAN) indicator and an ending VLAN indicator.

Regarding Claim 17, it is the corresponding method claim to device **Claim 8**. Therefore, it is rejected for the same reasons explained above.

Claim 17, the method of controlling the duplication of the packet of claim 13, wherein:
the non-contiguous range encoding includes a most significant bit (MSB) portion of a Virtual Local Area Network (VLAN) indicator and a bitmap decoded from a least significant bit (LSB) portion of the VLAN indicator.

Regarding Claim 18, it is the corresponding method claim to device **Claim 9**. Therefore, it is rejected for the same reasons explained above.

Claim 18, the method of controlling the duplication of the packet of claim 13, wherein:

the discrete encoding includes a first Virtual Local Area Network (VLAN) indicator and a second VLAN indicator.

Regarding Claim 19, it is the corresponding method claim to device **Claim 10**. Therefore, it is rejected for the same reasons explained above.

Claim 19, the method of controlling the duplication of the packet of claim 13, wherein:

the selecting the format of descriptors includes configuring in response to control bits.

Regarding Claim 20, it is the corresponding device claim to method **Claim 11**. Therefore, it is rejected for the same reasons explained above.

Claim 20, a means for controlling a duplication of a packet (device for replication of datagrams {packet}, paragraph [0009], page 1, lines 1-2) comprising:

a means for receiving the packet;

a means for accessing a first pointer;

a means for accessing a second pointer;

a means for accessing a descriptor in response to the second pointer; and

a means for applying an encoding for the duplication of the packet.

Citation of Pertinent Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Dobbins et al. (Patent Number: 5,684,800) discloses method for establishing restricted broadcast groups in a switched network.

Jain et al. (Patent Number: US 6,614,787 B1) discloses system and method for efficiently handling multicast packets by aggregating VLAN context.

Williams (Patent No.: US 6,775,283 B1) discloses passing VLAN information through descriptors.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leon Andrews whose telephone number is (571) 270-1801. The examiner can normally be reached on Monday through Friday 7:30 AM to 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rao S. Seema can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2616

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LA/la
June 15, 2007

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